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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/830,558	05/07/2001	Borkur Arnvidarson	P66611US0	8740
136	7590	12/02/2005	EXAMINER	
JACOBSON HOLMAN PLLC 400 SEVENTH STREET N.W. SUITE 600 WASHINGTON, DC 20004			ZEMAN, MARY K	
			ART UNIT	PAPER NUMBER
			1631	

DATE MAILED: 12/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/830,558

**Applicant(s)**

ARNVIDARSON, BORKUR

**Examiner**

Mary K. Zeman

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 80-138 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 80-92, 101-103, 105-116, 119, 122-124, 128-131 and 133-136 is/are rejected.
- 7) ☒ Claim(s) 93-100, 104, 117, 118, 120, 121, 125-127, 132, 137 and 138 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/21/05</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

The information disclosure statement (IDS) submitted on 3/21/05 was filed after the mailing date of the notice of allowability on 12/22/05, and before the payment of the issue fee on 3/22/05. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

**Applicant is advised that the Notice of Allowance mailed is vacated.** If the issue fee has already been paid, applicant may request a refund or request that the fee be credited to a deposit account. However, applicant may wait until the application is either found allowable or held abandoned. If allowed, upon receipt of a new Notice of Allowance, applicant may request that the previously submitted issue fee be applied. If abandoned, applicant may request refund or credit to a specified Deposit Account.

Prosecution on the merits of this application is reopened on claims 80-138, considered unpatentable for the reasons indicated below:

The claims are anticipated by the newly disclosed reference DD 293 429 A5, and its translation, or are obvious over that reference.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 80-84, 86-92, 102, 103, 105-106, 107-116, 122-124, 128-131, 133-136 are rejected under 35 U.S.C. 102(b) as being anticipated by DD 293,429 A5 (Tesch et al. DD 293 429 A5; 1990: PTO-1449).

Tesch et al DD 293 429 A5 discloses an automated milking system which optically tests a milking parameter, and analyzes it in stream in an analysis unit, communicates the result, and automatically determines the fate of the milk.

In comparison to claim 80:

i) Tesch identifies at least one volume of milk at page 4, lines 22-23

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ii) Tesch assesses particles in the volume of milk at page 4, lines 23-33. The particles are assessed by analysis of structure, texture, grey scale value, lumps, flocks, clotted substances, dirt, blood, colour changes, and other optically recognizable changes. See also page 5 lines 9-20.

iii) Tesch obtains at least one result of the assessment of particles. Page 5 lines 13-14.

iv), v) Tesch provides at least one predetermined parameter and correlates the one result to a parameter in the analysis unit at page 5 lines 15-19.

vi), vii) Tesch transfers the result to the regulator, which regulates the milking process by either discarding the milk, or sending it on as quality milk. See page 5 lines 20-23.

Tesch provides automated systems.

The methods and systems of Tesch can analyze one or more than one property of the milk. The counting/ identification of blood particles is specifically disclosed. The disclosure of Tesch makes clear that any optically recognizable characteristics can be used, including light scatter. Each milk stream is handled individually, and can be done before any animal identification. The regulation directs the milk to one or more storage means or outlets. The milk being tested is undiluted. As such, Tesch anticipates the above listed claims.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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Claims 85 and 109 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tesch as applied to claims 80-84, 86-92, 102, 103, 105-106, 107-116, 122-124, 128-131, 133-136 above, in view of WO 99/41605 (Managan).

Claims 85 and 109 add limitations that fat concentration or sodium concentration is measured in the milking stream.

Tesch et al DD 293 429 A5 discloses an automated milking system which optically tests a milking parameter, and analyzes it in stream in an analysis unit, communicates the result, and automatically determines the fate of the milk.

In comparison to claim 80:

- i) Tesch identifies at least one volume of milk at page 4, lines 22-23
- ii) Tesch assesses particles in the volume of milk at page 4, lines 23-33. The particles are assessed by analysis of structure, texture, grey scale value, lumps, flocks, clotted substances, dirt, blood, colour changes, and other optically recognizable changes. See also page 5 lines 9-20.
- iii) Tesch obtains at least one result of the assessment of particles. Page 5 lines 13-14.
- iv), v) Tesch provides at least one predetermined parameter and correlates the one result to a parameter in the analysis unit at page 5 lines 15-19.
- vi), vii) Tesch transfers the result to the regulator, which regulates the milking process by either discarding the milk, or sending it on as quality milk. See page 5 lines 20-23.

Tesch provides automated systems.

The methods and systems of Tesch can analyze one or more than one property of the milk. The counting/ identification of blood particles is specifically disclosed. The disclosure of Tesch makes clear that any optically recognizable characteristics can be used, including light scatter. Each milk stream is handled individually, and can be done before any animal identification. The regulation directs the milk to one or more storage means or outlets. The milk being tested is undiluted.

Tesch does not specifically speak to testing for fat content, or sodium content in the milk.

Managan (WO 99/41605) discloses automated milk analysis which uses a measurement of fat and/or sodium content of a volume of milk to determine whether a milk is quality, or not. The measurements are on-line with the milking. Sodium ion counts are determined, compared with threshold values, and used in classifying the quality of milk. See page 6. Temperature, and

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conductivity as well as quantity of milk, butter-fat percentage, protein percentage and viscosity of the milk are also determined (page 13, 16-17).

It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to have included measurements of fat and sodium concentration in the automated analysis machine of Tesch et al. One of skill in the art would have been motivated to incorporate such measurements, as Managan showed they are directly related to the presence of mastitis and poor milk quality. One of skill in the art of automated milking apparatus would have had a reasonable expectation of success at adding the measuring functionality of Managan to the devices and methods of Tesch, as they are simply conductivity based, which easily could have been added by way of electrodes to the analysis systems of Tesch. Therefore, the invention as a whole would have been prima facie obvious, absent evidence to the contrary.

Claims 101 and 119 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tesch as applied to claims 80-84, 86-92, 102, 103, 105-106, 107-116, 122-124, 128-131, 133-136 above, in view of WO 99/41605 (Managan).

Claims 101 and 119 add limitations that spectrophotometric properties are measured in the milking stream.

Tesch et al DD 293 429 A5 discloses an automated milking system which optically tests a milking parameter, and analyzes it in stream in an analysis unit, communicates the result, and automatically determines the fate of the milk.

In comparison to claim 80:

- i) Tesch identifies at least one volume of milk at page 4, lines 22-23
- ii) Tesch assesses particles in the volume of milk at page 4, lines 23-33. The particles are assessed by analysis of structure, texture, grey scale value, lumps, flocks, clotted substances, dirt, blood, colour changes, and other optically recognizable changes. See also page 5 lines 9-20.
- iii) Tesch obtains at least one result of the assessment of particles. Page 5 lines 13-14.
- iv), v) Tesch provides at least one predetermined parameter and correlates the one result to a parameter in the analysis unit at page 5 lines 15-19.
- vi), vii) Tesch transfers the result to the regulator, which regulates the milking process by either discarding the milk, or sending it on as quality milk. See page 5 lines 20-23.

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Tesch provides automated systems.

The methods and systems of Tesch can analyze one or more than one property of the milk. The counting/ identification of blood particles is specifically disclosed. The disclosure of Tesch makes clear that any optically recognizable characteristics can be used, including light scatter. Each milk stream is handled individually, and can be done before any animal identification. The regulation directs the milk to one or more storage means or outlets. The milk being tested is undiluted.

Tesch does not specifically speak to testing of spectrophotometric properties.

Tsenkova et al. (1994 : pto-1449) discloses methods of measuring milk quality by near-infrared irradiation of milk samples. Milk samples were subjected to NIR transmittance experiments, and the data was shown to correlate with high somatic cell count, and the presence of mastitis.

It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to have included spectrophotometric property measurements such as near-infrared transmittance in the automated analysis machine of Tesch et al. One of skill in the art would have been motivated to incorporate such measurements, as Tsenkova et al showed they are directly related to the presence of mastitis and poor milk quality. One of skill in the art of automated milking apparatus would have had a reasonable expectation of success at adding the measuring functionality of Tsenkova to the devices and methods of Tesch, as they are simply based on optical density, an "optically recognizable parameter", and which easily could have been added to the analysis systems of Tesch. Therefore, the invention as a whole would have been prima facie obvious, absent evidence to the contrary.

### ***Conclusion***

Claims 80-92, 101-103, 105-106, 107-116, 119, 122-124, 128-131, 133-136 are rejected.

Claims 93-100, 104, 117-118, 120-121, 125-127, 132, 137, 138 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 3/21/05 prompted the new ground(s) of rejection presented

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in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

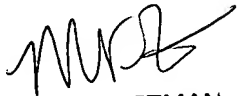
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary K Zeman whose telephone number is (571) 272 0723

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin Marschel, PhD can be reached on (571) 272 0718. The fax phone number for the organization where this application or proceeding is assigned is 571 273 8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

  
MARY K. ZEMAN  
PRIMARY EXAMINER

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11/22/05